

Conformity Assessment in the Off Highway Equipment Industry

Why Supplier's Declaration makes Sense!

Robert W. Noth
Deere & Company

Agenda

- *Review of Conformity Assessment Logic and Key Definitions*
- *Importance of Brand Building and Brand Reputation*
- *About the Industry – Important Facts and Characteristics relating to Conformity Assessment*
- *Industry objectives regarding Conformity Assessments*
- *Potential Benefits of the Industry Approach*

Basic Requirements & Definitions

Before any commercial transaction takes place some degree of trust and confidence must exist between the parties in the transaction.

- *The product or service supplier is considered the 1st Party to the transaction and must trust they will be adequately compensated.*
- *The consumer of the product or service is considered the 2nd Party to the transaction and must trust they will receive fair value for their payment.*
- *Any breakdown in trust or confidence between the parties before the transaction will likely negate a commercial arrangement.*
- *Any breakdown following the transaction will likely negate any further transactions and may result in other actions.*

Basic Requirements & Definitions

Conformity Assessment is a general term for assessing how well specifications* for products and services offered in the marketplace are met.

- *CA provides the parties with sufficient trust and confidence for commerce to occur.*
 - *CA provides a way for consumers to gain confidence in the products and services offered by suppliers and differentiate between them.*
 - *CA is a way to for suppliers to build confidence in their products or services and differentiate themselves from competitors.*

** Specifications as used here includes customer-defined requirements, government regulations and voluntary standards relating to the product or service offered.*

Conformity Assessment consists of two basic activities.

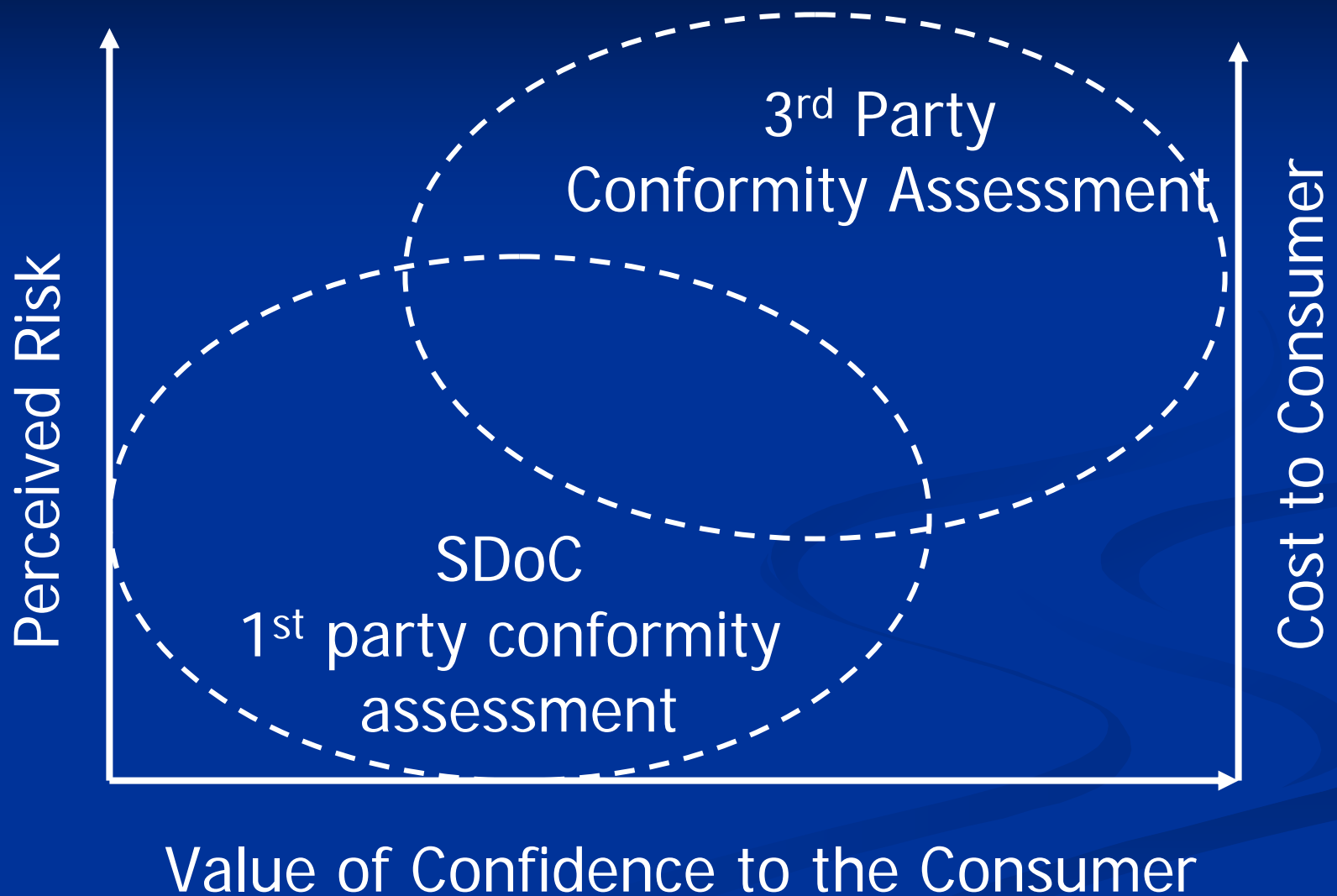
1. *Inspection*
2. *Testing*

The degree of trust and confidence required to satisfy the product or service specifications are acceptable generally determines who performs these basic activities and the rigor with which they are performed.

Conformity Assessment Systems

- *Conformity Assessment Systems are classified by who performs the assessment:*
 - *1st party - Supplier's Declaration*
 - *2nd party – Customer's assessment*
 - *3rd party – “Independent” assessment*
- *Each of the assessment method has cost implications in the market.*
- *The appropriate assessment process depends on risk, the level of trust between supplier and customer and economic aspects of the product or service*

Cost vs Value of Conformity Assessment



Conformity Assessment Process

The choice of the conformity assessment method should correlate with the value received and the cost to provide.

- *1st party assessment is adequate for the majority of products and services – (i.e. Low risk)*
- *2nd party often works for customers that have previous experience with a supplier (Brand recognition)*
- *3rd party is most often utilized when there is a high risk of harm from non compliant products or services*
 - *Voluntarily utilized by suppliers*
 - *Mandated by governments*
- *Cost – Benefit relationships must be evaluated.*

The degree of confidence and trust consumers have in a supplier depends on many factors including:

- *The perceived risks associated with non-conformity to specifications.*
- *The practical means of evaluating characteristics of interest*
- *The scale and type of production operation or in the case of a service, the method of delivery*
- *The effectiveness of the marketplace mechanisms to remove non-conforming products from the market*
- *The effectiveness of penalties for placing non-conforming products in the market*
- *The effectiveness of systems to recall non-conforming products from the market.*

Customer Defined Requirements, Regulations and Voluntary Standards make up the “specifications” that suppliers strive to meet. They:

- *Define Performance Expectations.*
- *Define Societal Expectations for protection of Health, Safety and the Environment*
- *Define how best to apply specific technologies*
- *Define specifications for certain materials, parts, or processes*
- *Ensure material availability in the market at an affordable cost.*
- *Provide benchmarks for improving quality and reducing costs.*
- *Change over time to reflect advancing expectations and technology.*

Successful Companies differentiate themselves by “Brand Building”

- *Conformity Assessment is about Stakeholder Confidence.*
- *Stakeholder Confidence is about Brand Recognition*
- *Brand Recognition only has value if it has a Positive Brand Reputation*
- *A Positive Brand Reputation is earned by consistently meeting Stakeholder expectations.*

The Global Off Highway Equipment Industry consists of well-known brand names...

- AGCO
- CATERPILLAR
- CLAAS
- CNH GLOBAL
- JOHN DEERE
- FIAT
- HITACHI
- HONDA
- ITT INDUSTRIES
- INGERSOLL- RAND
- JCB
- KOMATSU
- KUBOTA
- LIEBHERR
- MAHINDRA
- TORO
- VOLVO
- YANMAR

Earth Moving Machines

- *Machines for excavating, loading, transporting, spreading and compacting earth and other materials.*
- *12 types of machines with a large size range*
- *Small machines can drive through doors*
- *Large machines weigh over 500,000 kg*
- *ISO TC -127*



Agricultural Equipment

Consists of:

- *Tractors & Implements*
- *ISO TC 23/SC's 2 & 3*



Agricultural Equipment

- *Harvesting Equipment*
- *ISO TC 23/SC 7*



Timber Harvesting Equipment

Consists of:

- *Harvesters*
- *Log Skidders*
- *Forwarders*
- *TC 23/SC 15*



Industry Characteristics

- *Mature*
- *Not Highly Regulated Globally*
- *Low volume requires products be acceptable in global markets with minimal differences.*
- *Voluntary Compliance with internationally recognized and accepted standards is primary strategy for global market entry and product acceptance*
- *Significant history of participation in Standards Development processes*
 - ***Nationally***
 - ***Internationally***
- *Industry strategy is to develop their primary standards portfolio in ISO.*

The Off Highway Equipment Industry is working for alignment in 3 Areas



Industry Characteristics

Product "Use"
environments cover a wide range, are severe and must be engineered to meet

- *Cold / Hot*
- *Wet / Dry*
- *Dusty / Dirty*
- *Flat / Mountainous Terrain*
- *Densely populated / Uninhabited*



Industry Characteristics

Equipment is:

- Capital Intensive
 - *Highly Engineered*
 - *Increasingly Hi-Tech*
 - *Extensively Tested*
 - *Expensive*
 - *to produce*
 - *to distribute*
 - *to buy.*
- Low Unit Volume



Industry Characteristics

Customers are “Businesses” and Business People who know what they want and can afford!

- *Products are “tools”*
- *Purchases are “Capital Investments”*
- *Products are purchased to do specific tasks (i.e., harvest grain, move dirt, cut timber)*
- *Performance, Reliability, Serviceability are key customer expectations*
- *Performance is measured and compared mathematically (i.e., Cost per cubic meter of dirt, cost per ton of grain, cost per liter of fuel)*

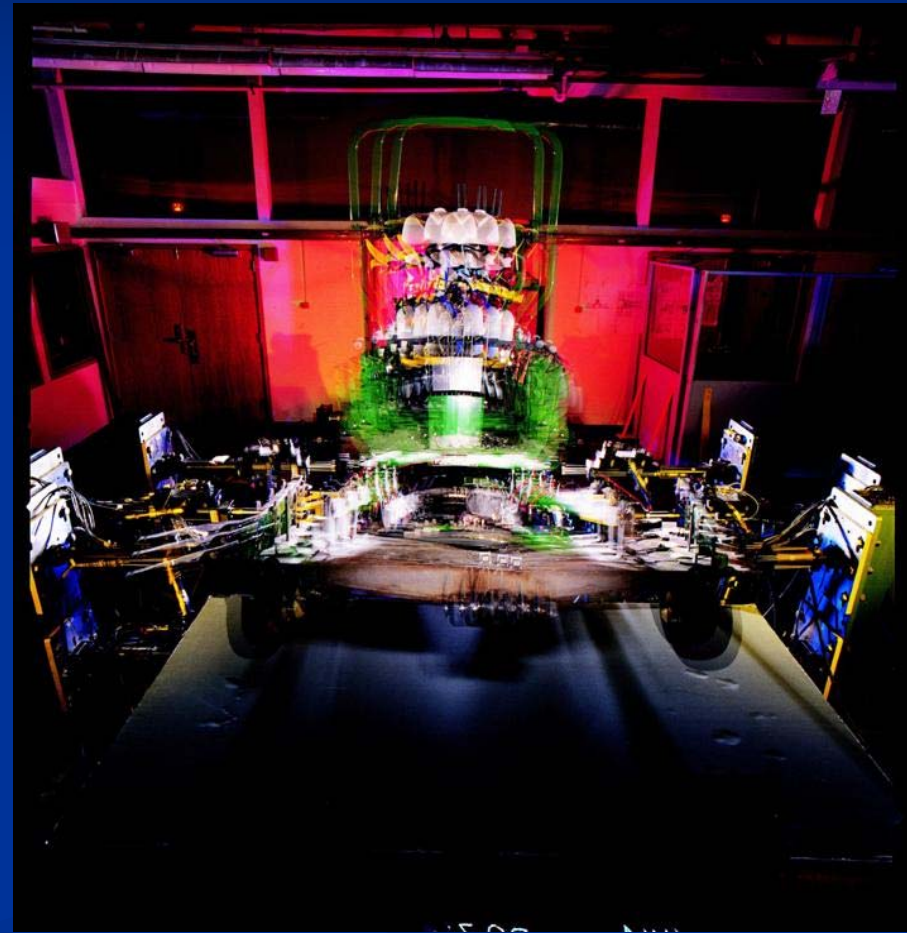
For all these reasons, "Supplier's Declaration of Conformity" makes the most sense for our industry:

- *We involve customers*
- *We test thoroughly*
- *We test continuously*
- *We have the best test equipment*
- *We have competent technicians*
- *We warrant our products*
- *We stand behind our products with parts and service*
- *We repair non-complying machines*



Testing is Expensive

- *Testing equipment is large, sophisticated, expensive and not readily available*
- *Cost of transporting equipment to test sites is prohibitive*
- *Some testing is destructive*
- *Repeating expensive tests in every country is redundant and adds no additional value.*
- *Testing Costs are not easily leveraged over low volumes.*



Off Highway Equipment Industry Conformity Assessment Objectives

- *That “Supplier’s Declaration of Conformity” remain an acceptable method of conformity assessment.*
- *When 3rd party conformity assessment is required, we want international recognition so one test can be accepted everywhere.
(Example: OECD Tractor Test)*

Benefits of SDoC in Heavy Equipment

- *Lower cost to consumers in all markets*
 - *Greater economies of scale*
- *Low risk of non-complying products*
- *Faster product delivery to end - users*
- *Faster pace of global market harmonization*
- *Greater value for all stakeholders*
 - *End user customers*
 - *Society*

Thanks for your attention.

*We look forward to your
questions!*